A NEW SPECIES OF ANDROLAELAPS FROM PEROGNATHUS IN SOUTHERN CALIFORNIA

(Acarina: Laelaptidae)

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The new species of mite described in this paper represents the seventeenth species recognized in the genus *Androlaelaps* Berlese 1903. Of these, eight are known only from Africa (Zumpt and Patterson 1950, Zumpt 1950), where they are found principally on rodents of the families Muridae and Cricetidae. Two species, *A. hermaphrodita* (Berl.) and *A. karawaieni* (Berl.), were described from ant nests in Italy and Russia respectively, although the former species has been recorded recently by Turk (1946) from the nest of *Apodemus* in Ireland. *A. sardous* is also known from *Apodemus* in Sardinia.

A. impensus Eads 1952 is known only from a collection of bulbs of *Lilium* shipped from Japan. The remaining five species of *Androlaelaps* have been taken in the nearctic and neotropical realms on rodents of the families Muridae, Cricetidae and Heteromyidae. The new species described here is the third one known from hosts of the genus *Perognathus*.

Androlaelaps is closely related to the genus *Hypoaspis* Canestrini 1885, from which it is separable by the enlarged second pair of legs with calcarate femora in both sexes. The chelicerae of the female are shear-like, provided with a few teeth and a seta on the fixed digit. The coxae are unarmed, bearing neither ventral spurs nor stout spines. The genito-ventral plate of the female bears a single pair of setae. In the male the holoventral plate may be fused with or free from the anal plate. The dorsal plate is undivided.

KEY TO FEMALES OF THE AMERICAN SPECIES OF ANDROLAELAPS

1. Femoral spur of leg II with pronounced teeth. Expanded portion of genito-ventral plate not wider than space between coxae IV 2
— Femoral spur of leg II smooth. Expanded portion of genito-ventral plate much wider than space between coxae IV . . . 3
2. Second pair of sternal plate setae overlapping bases of metasternal setae. Many ventral and dorsal setae long and sinuous. . . . . *sinuosa*, Furman, new species
— Second pair of sternal plate setae barely overlapping bases of third sternal plate setae Body setae not long and sinuous . . . . . *grandiculatus* Eads, 1951
3. Tarsus II with stout apical spines . . . . . *leviculus* Eads 1951
— Tarsus II without stout apical spines 4

4. Genito-ventral plate almost reaching anal plate. Sternal plate with slightly concave posterior margin . . . . . *setosus* Fox 1946
— Genito-ventral plate separated from anal plate by distance of over one-half the anal plate length. Sternal plate with truncate caudal margin . . . . . *johnstoni* Eads and Hightower 1951

Androlaelaps sinuosa Furman, new species

Female.—A large mite, measuring 1.179 mm. long, exclusive of gnathosoma, by 0.823 mm. wide. Shape broadly oval, with slight shoulders.

Dorsal plate covering most of width of dorsum but leaving unarmed the posterior tip of the opisthosoma; cephalic end of plate heavily solerotized and deflexed. Thirty-five pairs of setae on dorsal plate, characteristically long (up to 230 microns) and sinuous.

Venter—Presternal area indistinctly reticulate. Sternal plate widened posteriorly with concave margins measuring at narrowest points 114 microns long by 205 microns wide, lightly reticulate; sternal setae long and sinuate, anterior pair approximately 160 microns long arising from anterior margin of plate, second and third pairs 230 microns in length. Metasternal and genital setae sinuous, subequal to posterior sternal plate setae. Genito-ventral plate gently flask shaped, small, widely separated from anal plate. Flanking the genito-ventral plate two pairs of small narrow plates; two pairs of small metapodal plates more laterally situated as illustrated. Anal plate with broadly rounded anterior margin, posterior end terminating in a blunt tip; its usual terminal position necessitates dissection in order to observe the entire plate; adanal setae sinuous, 100 microns long; post-anal seta less than one-half as long. Uncovered area of venter bearing approximately 10 pairs of somewhat sinuous setae. Peritremal tube with supporting sclerotized plate extending from anterior border of coxae I almost to level of posterior border of coxae IV with stigma located at level midway between coxae III and IV; alary anterior extension of peritremal plate extends forward fusing with anterior tip of dorsal plate. Second pair of legs greatly enlarged, calcarate, armed with a massive femoral spur bearing strong teeth on the inner lateral margins; a small, blunt, striated spine located immediately distal to large femoral spur; patella and tibia each with a striated, sharp, stout spine bent at right angle to its axis (=lancet-shaped hair of Zumpt 1950); tarsus with two prominent, stout, terminal spines and a basal spine similar to, but smaller than, tibial spine. No other unusual features visible on legs.

Gnathosoma—typical for genus as illustrated. Capitular groove with six transverse rows, each containing seven to ten teeth. Fixed digit of chelicera with a short sharp seta and three teeth, movable digit bearing two teeth.

Male.—*Idiosoma*—1.065 mm. long by 0.823 mm. wide. Dorsum essentially as in female.

Venter with narrow, elongate holoventral plate, which has a truncate caudal border just posterior to hind margin of coxae IV, widely separated

EXPLANATION OF FIGURES

Androlaelaps sinuosa, female. Fig. 1. Venter; Fig. 2. Dorsal plate; Fig. 3. Peritreme; Fig. 4. Anal plate.

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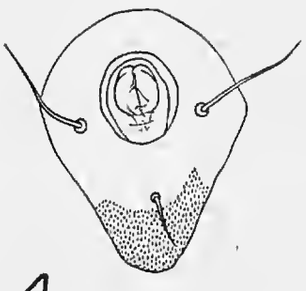

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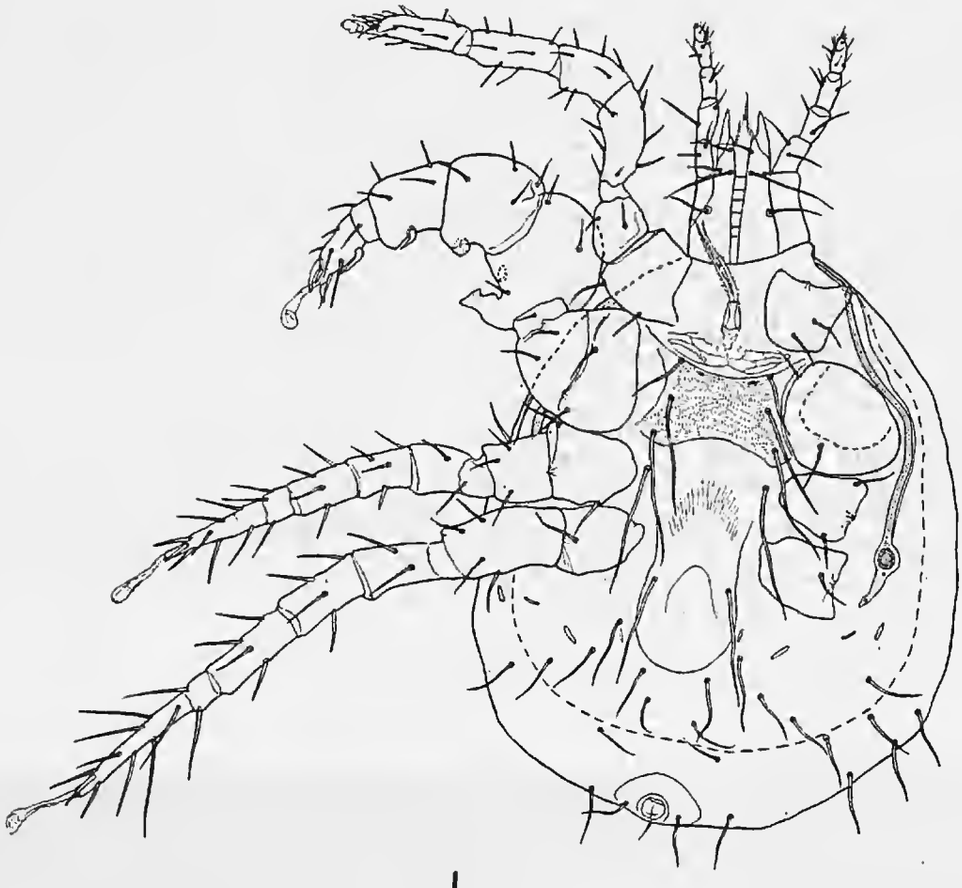

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from anal plate. Genital orifice on anterior margin of holoventral plate; all but the first of the five pairs of holoventral seate long and sinuous. Two pairs of metapodal plates visible. Anal plate and peritreme as in female. Approximately 12 pairs of setae on unarmed portion of opisthosoma. Legs as described for female.

Gnathosoma—Fixed digit of chelicera with subapical tooth; a short sharp seta located at proximal level of apical four-fifths of the fixed digit. Movable digit divided into two branches as illustrated, one opposing the fixed digit and supplied with one tooth, the other articulated at mid-length and produced as a long, sickle-shaped process. The usual basal brush of setae around the movable digit present.

Holotype female and allotype male, collected 18 October, 1953; from *Perognathus* sp. probably *fallax fallax* at PIGEON PASS, RIVERSIDE COUNTY, CALIFORNIA (Deposited in U. S. Nat. Museum). *Paratypes*. Twelve females and three males with same data as type.

The following are all from *Perognathus fallax fallax:*

Twenty-six females, 7 males, Reche Canyon, San Bernardino County, Calif., October 1, 1951; 16 females, 5 males, Reche Canyon, San Bernardino County, Calif., October 4, 1951; 9 females, 6 males, Reche Canyon, San Bernardino County, Calif., Oct. 5, 1951; 12 females, 2 males, Reche Canyon, San Bernardino County, Calif., Oct. 11, 1951; 17 females, 4 males, Reche Canyon, San Bernardino County, Calif., Oct. 12, 1951; 8 females, 4 males, Loma Linda, San Bernardino County, Calif., July 24, 1951; 6 females, 1 male, Loma Linda, San Bernardino County, Calif., July 27, 1951; 3 females, 2 males, Loma Linda, San Bernardino County, Calif., Aug. 2, 1951; 8 females, 8 males, Lucerne Valley, San Bernardino County, Calif., Nov. 7, 1953; 4 females, 1 male, Plunge Creek Canyon, San Bernardino County, Calif., Nov. 19, 1951.

Androlaelaps sinuosa is easily distinguished from all other species of the genus by the presence of very long sinuous setae on dorsal and ventral sides of both sexes. However, the most basic morphological difference displayed by this species is the widely divided holoventral plate of the male; all other members of the genus have the anal plate incorporated in the holoventral plate.

Some authorities might establish a new genus for the reception of this species. To this the author cannot subscribe, since the host affinities and combination of morphological features definitely align it with *Androlaelaps*.

Grateful appreciation is expressed to Mr. Raymond E. Ryckman of the Loma Linda School of Tropical and Preventive Medicine, who made available the specimens described in this paper.

EXPLANATION OF FIGURES

Androlaelaps sinuosa. Fig. 5. Venter of male; Fig. 6. Male chelicera; Fig. 7. Female chelicera.

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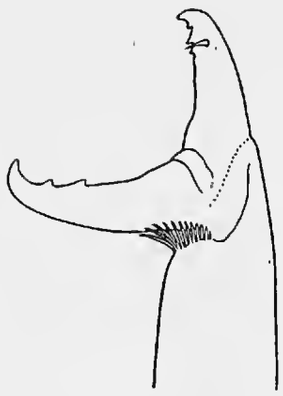

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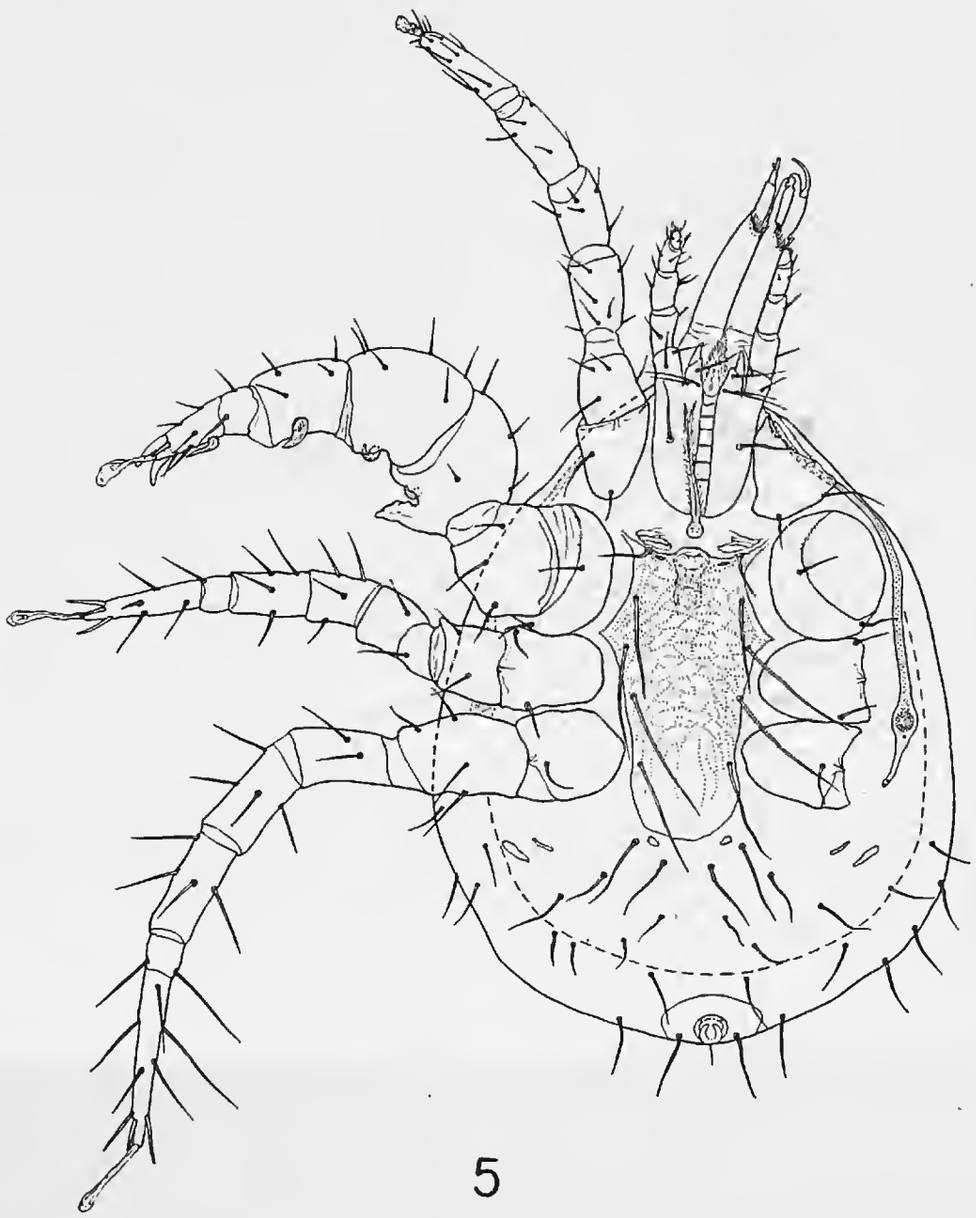

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THE HOST OF MYRMOSULA RUTILANS (BLAKE)

(Hymenoptera: Tiphiidae)

During the spring of 1953, females of *Myrmosula rutilans* (Blake)[1] were taken running about the nest sites of the andrenid bee *Nomadopsis scutellaris* (Fowler)[2]. The association of the wasp with the bee was so consistent that the writer suspected the wasps of being parasitic on the bees. Females of the wasp were often observed to enter the burrows of the bee. Final confirmation did not come until June 15, when two females of the *Myrmosula* matured from cells which were taken from a *Nomadopsis* nest of the previous summer. This is apparently the first host record for a species of *Myrmosula* and so is of considerable interest. In fact, it is one of the few records that we have for any wasps of the subfamily *Myrmosinae,* the only other records being for *Myrmosa unicolor* Say, a parasite of *Tiphia* sp., *Halictus (Chloralictus) pruinosm* Robertson, *H. (C.) stultum* Cresson, and possibly *Lindenius (Trachelosimus) columbianus errans* (Fox).—ROY A. SNELLING, Turlock, California.

[1] Identification verified by P. D. Hurd, Jr.

[2] Identification verified by J. G. Rozen, Jr.